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**Notice of Allowability**

Application No.

09/591,437

Examiner

Thoi V. Duong

Applicant(s)

XUE ET AL.

Art Unit

2871

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed September 24, 2007.
2. ☒ The allowed claim(s) ~~is/are~~ 2-9, 11-13, 25, 27-34 and 37-48.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) <u>None</u>   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date <u>11/27/07</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                   | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|  | 9. <input type="checkbox"/> Other _____   |

### DETAILED ACTION

1. This office action is in response to the Amendment filed on September 24, 2007 after The Board of Patent Appeals and Interferences made a Decision on Appeal on August 15, 2007.

Accordingly, claims 2-4, 9, 11 and 12 were amended, claims 1, 10, 14-24 and 26 were cancelled, and new claims 27-48 were added. Currently, claims 2-9, 11-13, 25 and 27-48 are pending in this application.

### EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Robert G. Crouch (Reg. No. 34,806) on November 27, 2007.

In the claims:

Claim 11: in line 3, after "a first" insert --substrate--.

Claim 13: in line 4, after "a first" insert --substrate--.

Claim 25: in line 3, after "a first" insert --substrate--.

Claim 35: cancel.

Claim 36: cancel.

Claim 47: in line 1, after "device of Claim", delete "25" and insert --46--.

***Allowable Subject Matter***

3. Claims 2-9, 11-13, 25, 27-34 and 37-48 are allowed.

The following is an examiner's statement of reasons for allowance: none of the prior art of record fairly suggests or shows all of the limitations as claimed. Specifically,

Re claims 11 and 13, none of the prior art of record discloses, in combination with other limitations as claimed, an optical device including a ferroelectric liquid crystal material having free of chevron structures without a need to otherwise apply an additional treatment to the optical device, wherein an optical retardance of the optical device remains generally constant during continuous variation of the optical state of the light output.

The most relevant reference, USPN 6,141,076 of Liu et al., fails to disclose or suggest a constant optical retardance of the optical device remained during continuous variation of the optical state of the light output. As shown in Figs. 10A and 10B, the Liu et al.'s reference only discloses that the particular optical state of the light output is continuously variable between a minimum optical state (V-) and a maximum optical state (V+) (col. 5, lines 40 through col. 6, line 12).

Re claim 25, Liu discloses an optical device having a similar structure free of chevron with the claimed invention and alignment treatment is the only treatment; however, Liu's disclosure directs to a non-surface-stabilized ferroelectric liquid crystal instead of surface-stabilized FLC of the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

**Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thoi V. Duong whose telephone number is (571) 272-2292. The examiner can normally be reached on Monday-Friday from 8:30 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms, can be reached at (571) 272-1787.

Thoi V. Duong – Primary Examiner

November 27, 2007

